

IN THE SPECIFICATION:

Please replace the Summary of Invention section on page 14, line 5 through page 16, line 20 with the following amended section:

--It is an object of the present invention to provide an image pickup apparatus capable of accurately and quickly executing focus detection from small to large defocus.

In order to achieve the above object, according to an aspect of the present invention, there is provided an image pickup apparatus, comprising ~~an arrangement of a plurality of pixel units each including a first photoelectric conversion unit for photoelectrically converting a first light component of a light beam that has separated an exit pupil of an imaging optical system into a plurality of parts, and a second photoelectric conversion unit for photoelectrically converting a second light component different from the first light component, wherein each of the pixel units includes a sensitivity region where a first sensitivity distribution by the first photoelectric conversion unit and a second sensitivity distribution by the second photoelectric conversion unit overlap.~~

~~According to another aspect of the invention, there is provided an image pickup apparatus comprising:~~

~~a first semiconductor region having a first conductivity type;~~

~~a second semiconductor region formed in the first semiconductor region and having a second conductivity type different from the first conductivity type;~~

~~a third semiconductor region formed in the first semiconductor region and having the second conductivity type different from the first conductivity type, wherein the second~~

and third semiconductor regions are photoelectric conversion units formed adjacent to each other;
and

————— a fourth semiconductor region having the first conductivity type is formed between the second semiconductor region and the first semiconductor region, wherein the third semiconductor region is formed under an opening.

————— According to still another aspect of the present invention, there is provided an image pickup apparatus comprising:

————— a plurality of pixel units each including a first photoelectric conversion unit for photoelectrically converting a first light component of a light beam that has separated an exit pupil of an imaging optical system into a plurality of parts, and a second photoelectric conversion unit for photoelectrically converting a second light component different from the first light component; and

————— a processing circuit adapted to execute focus adjustment on the basis of a first sensitivity distribution including a sensitivity distribution of the first photoelectric conversion unit and a second sensitivity distribution including a sensitivity distribution of the second photoelectric conversion unit, the sensitivity distributions partially overlapping each other.

————— With the above arrangements, since a pair of line spread functions in the phase shift direction of focus detection using the phase difference scheme can have similar shapes from small to large defocus, accurate and quick focus detection can be realized. In addition, since light components that become incident on a region between the first and second photoelectric conversion units can also be photoelectrically converted, exposure calculation using the APEX scheme is almost realized: an output unit which outputs a first electric signal corresponding to a

first light flux included in light fluxes from different areas of an exit pupil of an imaging optical system, and a second electric signal corresponding to a second light flux different from the first light flux, included in the light fluxes; and a plurality of pixel units each including a first sensitive area for outputting the first electric signal, wherein the first sensitive area and the second sensitive area overlap each other.

The above and other objects, features, and advantages of the present invention will become apparent from the following description in conjunction with the accompanying drawings.--